ODTU-Bilkent Algebraic Geometry

"Arf Rings I"

BY

Ali Sinan Sertöz

(Bilkent)

Abstract: The aim of these two talks is to discuss the background and the content of Arf's 1946 paper on the multiplicity sequence of an algebraic curve branch. I will start by giving the geometric and algebraic descriptions of a singular branch for a curve, describe its multiplicity sequence obtained until it is resolved by blow up operations. Du Val defines some geometrically significant steps of the resolution process and shows that if the multiplicity sums up to those points are known then the whole multiplicity sequence can be recovered by a simple algorithm. However all this information must be encoded at the very beginning in the local ring of the branch. The problem is then to decipher this data.
This week I will mostly describe the background and explain what is involved in actually finding these numbers.
Arf's original article "Une interpretation algebrique de la suite des ordres de multiplicite d'une branche algebrique", together with my English translation can be found on: http://sertoz.bilkent.edu.tr/arf.htm

Date: 22 February 2019, Friday
Time: 15:40 +
Place: Mathematics Seminar Room SA-141

Tea and cookie will be served before the talk. You are most cordially invited.